

ABSTRACT OF THE DISCLOSURE

5 A method and apparatus for accurately estimating
the carrier frequency offset and the carrier phase
offset of a digitally modulated signal using a signal
processing algorithm to initialize the state variables
of a Phase-Locked Loop (PLL) is disclosed. A sequence
of phase values is estimated from a received sequence
of symbols and the angular effect due to the modulation
format is removed from the sequence of phase values. A
10 curve-fit algorithm based in one embodiment on the RLS
algorithm is then applied to a sequence of unwrapped
phase values to estimate the carrier frequency offset
and the carrier phase offset.